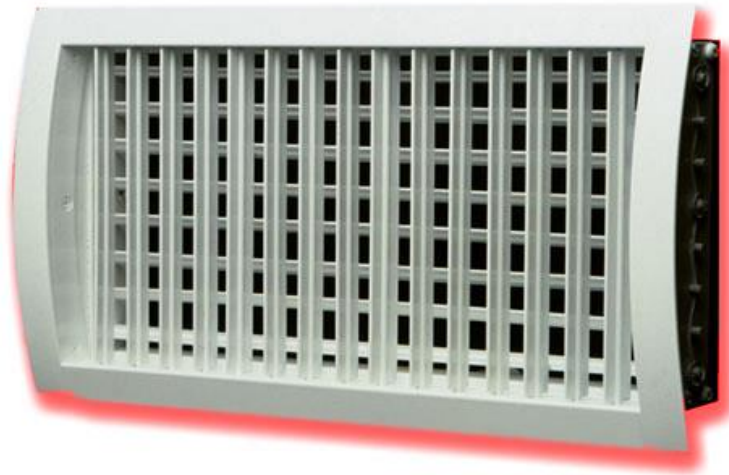


# ROUND DUCT GRILLES

Rev.02  
26-05-2015



## GMC RDG-006 PRODUCT SPECIFICATIONS:

- Standard Material: Aluminum profile and Aluminum sheet.
- Used on round type return air ducts.
- Aerodynamic blades are easily adjustable.
- Round duct grilles are designed to assemble directly to the air duct, manufactured according to orders.
- Has two models: Single Row Model (RDG-106: Return), Double Row Model (RDG-206: Supply).
- Mounted with 4 mm screws on frame with appropriate quantity.
- On request, damper can be added to control air flow volume.
- Eloxal, anodizing or electrostatic powder coating with the color from RAL catalogue.



**HVAC Systems and Equipments Co.**  
4640 Hedgoxe Road 227 Plano, TX 75024 – US

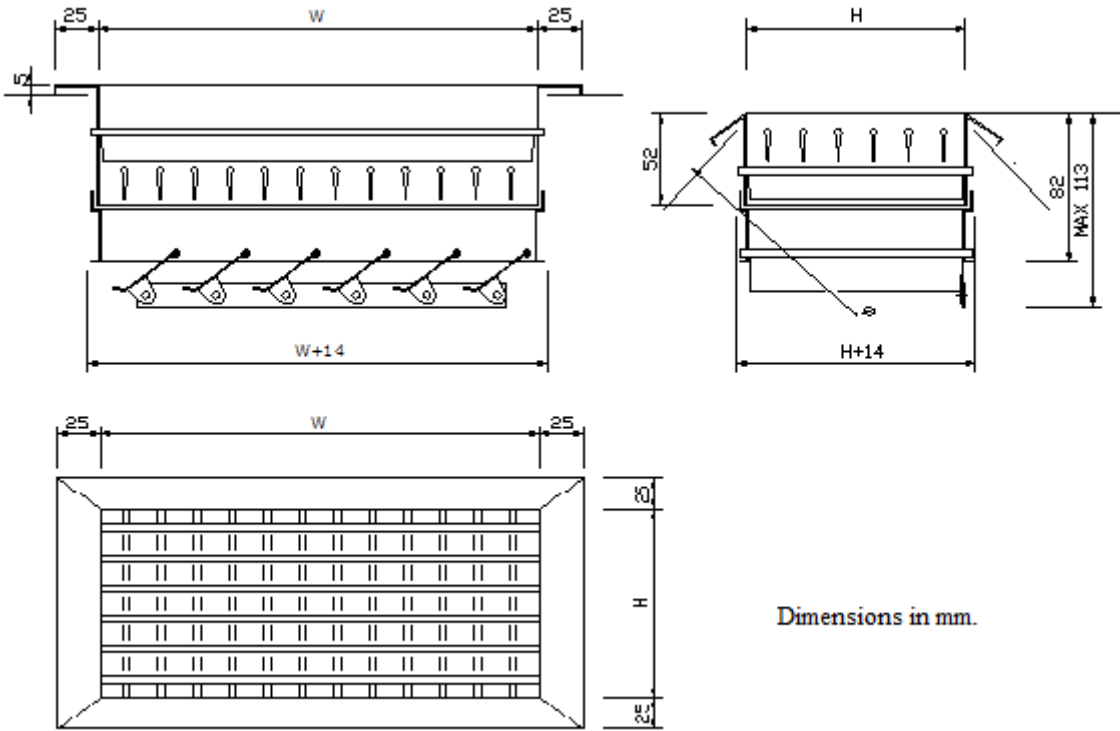
[www.gmcair.com](http://www.gmcair.com) 

# ROUND DUCT GRILLES

Rev.02  
26-05-2015

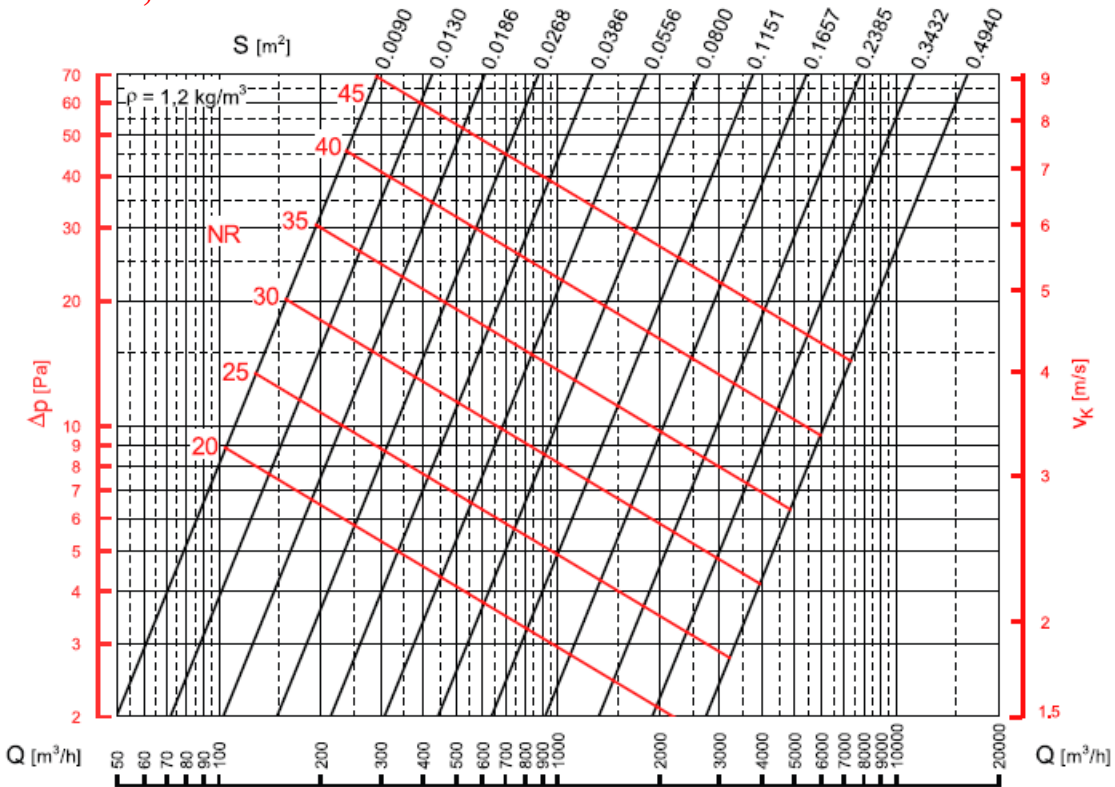


## TECHNICAL DETAILS



## DATA DIAGRAM

### RDG-006, PRESSURE LOSS AND NOISE LEVELS



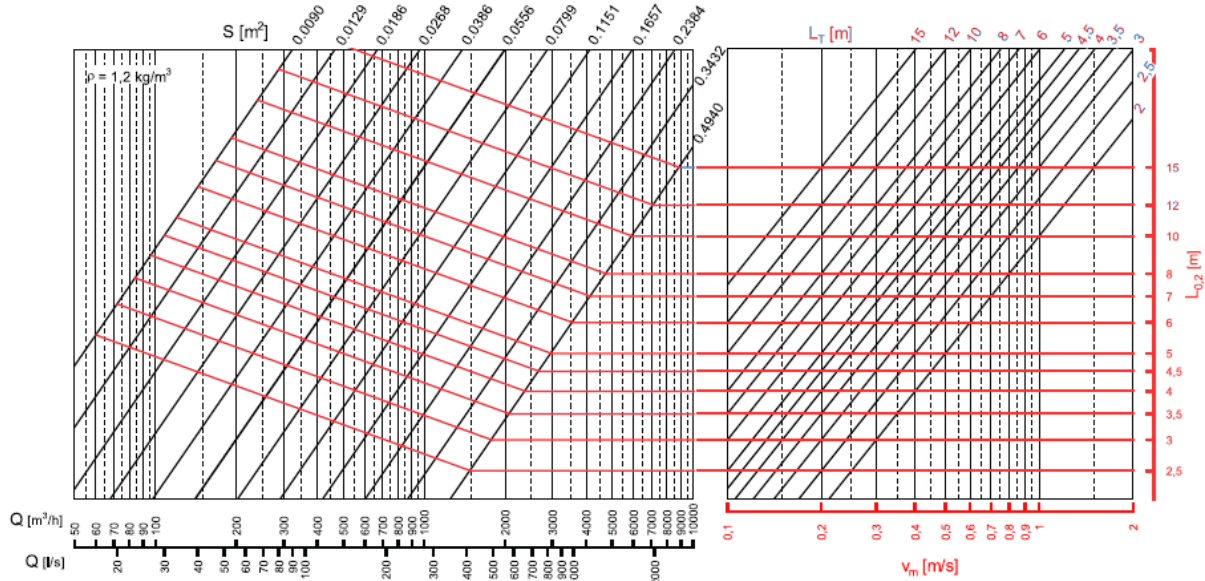
# ROUND DUCT GRILLES

Rev.02  
26-05-2015



- Q [m<sup>3</sup>/h]      supply air flow rate
- S [m<sup>2</sup>]        effective outlet area
- v<sub>k</sub> [m/s]      velocity relating to the effective outlet area S
- v<sub>m</sub> [m/s]      terminal velocity relating to the throw axis
- Δp [Pa]        total pressure loss
- NR              noise rating (ISO standard, in relation to 10<sup>-12</sup> W) taking no account of attenuation of the room
- D [°]            angle of deflection of the fins

## RDG-006, THROW DISTANCES (m)



- Q [m<sup>3</sup>/h]      supply air flow rate
- S [m<sup>2</sup>]        effective outlet area
- V<sub>k</sub> [m/s]      velocity relating to the effective outlet area S
- v<sub>m</sub> [m/s]      terminal velocity relating to the throw axis
- D [°]            angle of deflection of the fins
- L<sub>T</sub> [m]        horizontal isothermal throw with ceiling effect angle of deflection D = 0°

MAXIMUM HEIGHTS FOR DIAMETERS											
Round duct diameter (mm)											
ø (mm)	200	250	300	350	400	450	500	550	600	900	1200
H max. (mm)	75	75	100	100	125	125	150	150	150	200	250

## RDG-006, EFFECTIVE AREA TABLE (m<sup>2</sup>)

W (mm)																
H (mm)	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200
75	0,006	0,010	0,013	0,016	0,019	0,023	0,026	0,029	0,032	0,039	0,045	0,052	0,058	0,065	0,071	0,077
125	0,010	0,016	0,021	0,026	0,031	0,036	0,042	0,047	0,052	0,062	0,073	0,083	0,094	0,104	0,114	0,125

W (mm)																
H (mm)	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200
75	0,005	0,008	0,011	0,013	0,016	0,018	0,021	0,023	0,026	0,031	0,036	0,041	0,047	0,052	0,057	0,062
125	0,009	0,013	0,017	0,021	0,025	0,029	0,033	0,037	0,042	0,050	0,058	0,066	0,074	0,083	0,091	0,099



# ROUND DUCT GRILLES

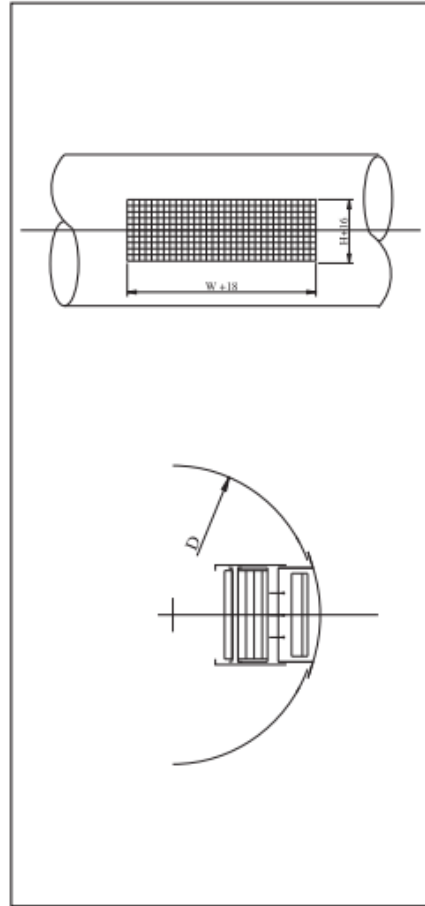
Rev.02  
26-05-2015



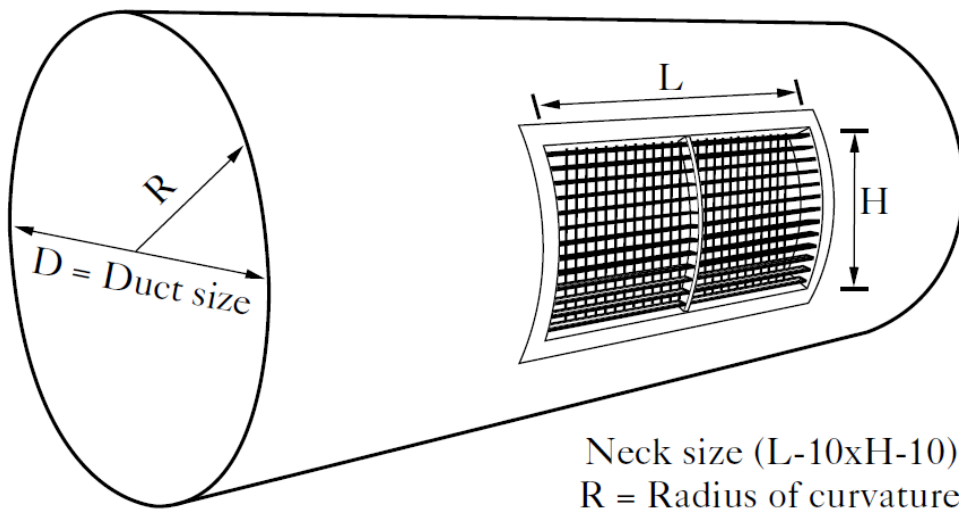
**DETAILED SELECTION TABLE**

Standard size ØDN (mm)	D Round Duct Diameter	Return Grille		Supply Grille	
		Effective Area m <sup>2</sup>	Area m <sup>2</sup>	Effective Area m <sup>2</sup>	Area m <sup>2</sup>
125/125	150	0,014	126	0,011	99
150/150		0,019	151	0,015	135
175/175		0,023	207	0,019	171
200/200		0,028	252	0,023	207
225/225		0,037	333	0,03	270
250/250	400	0,048	414	0,035	333
300/300		0,055	495	0,045	405
350/350		0,068	652	0,055	540
400/400		0,087	833	0,072	693
450/450		0,11	1035	0,09	864
500/500	300	0,037	333	0,03	270
550/550		0,048	414	0,035	333
600/600		0,055	495	0,045	405
650/650		0,068	652	0,055	540
700/700		0,092	828	0,075	675
750/750	900	0,118	1062	0,095	855
800/800		0,041	369	0,034	306
850/850		0,052	465	0,045	405
900/900		0,069	621	0,056	504
950/950		0,083	747	0,068	612
1000/1000	500	0,110	990	0,09	810
1050/1050		0,138	1242	0,113	1017
1100/1100		0,166	1494	0,135	1215
1150/1150		0,058	495	0,045	405
1200/1200		0,074	666	0,060	540
1250/1250	600	0,092	828	0,075	675
1300/1300		0,11	990	0,090	810
1350/1350		0,137	1233	0,120	1080
1400/1400		0,184	1656	0,150	1350
1450/1450		0,22	1980	0,180	1620

Assumed air velocity is 2,5 m/s.



## MOUNTING DETAILS



# ROUND DUCT GRILLES

Rev.02  
26-05-2015



## ORDER PARAMETERS

RDG-006	PFD	OD9010	SM	N 2000X100
RDG-106: Single Row RDG-206: Double Row		N: Neck Size F: Frame Size		
000: Without Damper HND: Hinged Damper PFD: Parallel Flap Damper		00: No Mounting SM: Screw Mounting		
		00: No coating EX: Eloxal Coating OD----: Oven Drying Coating		

